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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/089,396	09/05/2002	Johann Kuebel	089780-000000US	4760

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EXAMINER

RINEHART, KENNETH

ART UNIT	PAPER NUMBER
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3749

DATE MAILED: 07/30/2003

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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/089,396

Applicant(s)

KUEBEL, JOHANN

Examiner

Kenneth B Rinehart

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 05 September 2002.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-23 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-23 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 05 September 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s) _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 3 and 8. 6) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 15, 16, and 17 are rejected under 35 U.S.C. 112, second paragraph, as being incomplete for omitting essential structural cooperative relationships of elements, such omission amounting to a gap between the necessary structural connections. See MPEP § 2172.01. The omitted structural cooperative relationships are: the structural relationship between the interior tube and the rest of the apparatus, the structural relationship between the space surrounded by exterior casing and the rest of the apparatus, the structural relationship between the combustion air supply line and controllable blower and the rest of the apparatus.

Regarding claim 1, the phrase "preferably from rapeseed" renders the claim indefinite because it is unclear whether the limitation(s) following the phrase are part of the claimed invention. See MPEP § 2173.05(d).

Regarding claim 2, the phrase "preferably to a temperature of about 1000 C" renders the claim indefinite because it is unclear whether the limitation(s) following the phrase are part of the claimed invention. See MPEP § 2173.05(d).

Regarding claim 7, the phrase "such as" renders the claim indefinite because it is unclear whether the limitations following the phrase are part of the claimed invention. See MPEP § 2173.05(d).

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Regarding claim 12, the phrase "preferably" renders the claim indefinite because it is unclear whether the limitations following the phrase are part of the claimed invention. See MPEP § 2173.05(d).

Regarding claim 13, the phrase "preferably" renders the claim indefinite because it is unclear whether the limitations following the phrase are part of the claimed invention. See MPEP § 2173.05(d).

Regarding claim 14, the phrase "preferably" renders the claim indefinite because it is unclear whether the limitations following the phrase are part of the claimed invention. See MPEP § 2173.05(d).

Regarding claim 15, the phrase "preferably" renders the claim indefinite because it is unclear whether the limitations following the phrase are part of the claimed invention. See MPEP § 2173.05(d).

Regarding claim 20, the phrase "preferably" renders the claim indefinite because it is unclear whether the limitations following the phrase are part of the claimed invention. See MPEP § 2173.05(d).

Regarding claim 22, the phrase "preferably" renders the claim indefinite because it is unclear whether the limitations following the phrase are part of the claimed invention. See MPEP § 2173.05(d).

Claim 15 recites the limitation "the interior tube" in line 2. There is insufficient antecedent basis for this limitation in the claim.

Claim 16 recites the limitation "the space" in line 2. There is insufficient antecedent basis for this limitation in the claim.

Claim 22 recites the limitation "the interior tube" in line 2. There is insufficient antecedent basis for this limitation in the claim.

Claim 22 recites the limitation "the exterior casing" in line 2. There is insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1, 3, 4, 7, 8, 9, and 18, 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over West et al in view of Guida. West et al discloses a method for producing thermal energy ... characterized in that the combustion space of a combustion chamber (13, fig. 2), is first preheated (36, fig. 2), after which preheating is discontinued and a pressure of at least 2 bar is maintained in the combustion space, in that a pressure between 2 bar and 13 bar is maintained in combustion space of combustion chamber (Base on the construction of the combustion chamber and the pulsed combustion operation of the apparatus it is inherent that high pressures will be obtained.), whereby the ... subsequently fed in burn explosively, and the resulting flame exits through a flame exit opening (col. 4, lines 51-64, 26, fig. 2), a combustion chamber with a combustion space in which a disconnectible preheating device such as an oil burner is provided (36, fig.), and which is provided with a flame exit opening (26, fig. 2) , whereby devices for maintaining a pressure in the combustion space is provided (22, 14, 16, 18, fig. 2), the flame exit opening is designed as a Venturi nozzle (28, 16, 18, fig. 2), the flame exit

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opening is designed as a multistage Venturi nozzle, with an afterburner device provided between the different stages (18, 16, fig. 2),. West et al discloses applicant's invention substantially as claimed with the exception of form small grained oil seeds, preferably rapeseed, and that unreduced seeds as well as combustion air are fed into this combustion space in controlled amounts, the seeds are fed into combustion chamber individually and in succession, and into which lead a feed line for feeding in the oilseeds and at least one combustion air supply line, the pressure control devices are provided in the feed line for feeding in the oilseeds and/or in the area of the flame exit opening, a controllable proportioning device is provided in the feed line for feeding in the oilseeds. Guida teaches form small grained oil seeds , preferably rapeseed, and that unreduced seeds as well as combustion air are fed into this combustion space in controlled amounts (20. 30, fig.), the seeds are fed into combustion chamber individually and in succession (26, fig. 1), and into which lead a feed line for feeding in the oilseeds and at least one combustion air supply line (line containing 24, 26, 28, 30, fig.), the pressure control devices are provided in the feed line for feeding in the oilseeds and/or in the area of the flame exit opening (30, fig. 1), a controllable proportioning device is provided in the feed line for feeding in the oilseeds (26, fig.) for the purpose of improving efficiency. It would have been obvious to one of ordinary skill in the art to modify West et al by including from small grained oil seeds, preferably rapeseed, and that unreduced seeds as well as combustion air are fed into this combustion space in controlled amounts, and into which lead a feed line for feeding in the oilseeds and at least one combustion air supply line, the pressure control devices are provided in the feed line for feeding in the oilseeds and/or in the area of the flame exit opening, a

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controllable proportioning device is provided in the feed line for feeding in the oilseeds as taught by Guida for the purpose of improving efficiency so that the combustor operation improves.

Claim 17 is rejected under 35 U.S.C. 103(a) as being unpatentable over West et al in view of Guida as applied to claim 7 above, and further in view of Kelly et al. West et al in view of Guida discloses applicant's invention substantially as claimed with the exception of in that at least one combustion air supply line, a controllable blower is provided. Kelly et al teaches in that at least one combustion air supply line, a controllable blower is provided (col. 8, lines 41-53) for the purpose of providing the motive source for the air flow. It would have been obvious to one of ordinary skill in the art to modify West by including in that at least one combustion air supply line, a controllable blower is provided as taught by Guida et al for the purpose of providing the motive source for the airflow so that the apparatus will function.

Claims 21 and 22-23 are rejected under 35 U.S.C. 103(a) as being unpatentable over West et al in view of Guida as applied to claims 8 and 7 above, and further in view of Stone et al. West et al in view of Guida discloses applicant's invention substantially as claimed with the exception of the flame exit opening is designed as a labyrinth, the combustion chamber in that the combustion space, in particular the interior tube and the exterior casing surrounding same are made of a fire resistant, preferably ceramic material, the combustion space is surrounded by a cooling jacket. Stone et al teaches the flame exit opening is designed as a labyrinth (24, fig. 3), the combustion space is surrounded by a cooling jacket (32, fig. 3) for the purpose of providing for heat transfer. It would have been obvious to one of ordinary skill in the art to modify West by including the flame exit opening is designed as a labyrinth, the combustion space is surrounded by a cooling jacket as taught by Stone et al for the purpose of providing for heat

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transfer so that the useful life of the apparatus is extended. West et al discloses applicant's invention substantially as claimed with the exception of the combustion chamber in that the combustion space, in particular the interior tube and the exterior casing surrounding same are made of a fire resistant, preferably ceramic material. Stone et al teaches the combustion chamber in that the combustion space, in particular the interior tube and the exterior casing surrounding same are made of a fire resistant, preferably ceramic material for the purpose of extending the useful life of the apparatus. It would have been obvious to one of ordinary skill in the art to modify West et al by including the combustion chamber in that the combustion space, in particular the interior tube and the exterior casing surrounding same are made of a fire resistant, preferably ceramic material as taught by Stone et al for the purpose of extending the useful life of the apparatus to reduce operating costs.

Allowable Subject Matter

Claims 2, 5-6, 10-16, and 20 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, second paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The following patents are cited to further show the state of art with respect to furnaces and burners in general: Berberich (3,473,879), Charest (5,343,819), Melton et al (4,113,315).

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kenneth B Rinehart whose telephone number is 703-308-1722.

The examiner can normally be reached on 7:30-4:30 M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ira Lazarus can be reached on 703-308-1935. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9302 for regular communications and 703-308-9303 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0861.

KBR

July 24, 2003


Kenneth Rinehart

Patent Examiner

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